

Problems of Medical Translation *

BY HENRY FISCHBACH, ATA,† *Director*

*The Language Service
New York, New York*

MEDICAL translations may be broadly divided into two main categories, depending on their purpose: information or promotion, although this is not to imply that the two are mutually exclusive. A medical communication may—indeed, ideally should—inform as it promotes, and, of course, vice versa. But, by and large, a text intended solely for internal information need not be as highly polished stylistically as one prepared for external promotion. The two are chiefly distinguished by the inclusion—subtle or otherwise—of a sales message.

Translation enters into the picture whenever the source language and the target language differ, regardless of the communication medium used: clinical papers, package inserts, direct mail, and all other printed matter; slide projections or motion pictures; broadcast commentaries; recordings; patents. Good translating is the *rewriting* in the foreign language of the *ideas* contained in the original. Indeed, we might even say that a good translator ought to be as good a writer as the one who wrote the original. Just as the mere possession of a camera does not make a person a photographer, so mere knowledge of a foreign language does not make a translator.

A few years ago a book review in *The New Yorker* said of a certain book: "... translated from the Finnish by Alan Blair, who has the gift of making his translation invisible." An "invisible" translation is no mean achievement. In fact, it is a superlative one—the goal of every translation. The foreign-language reader of any advertising and promotional literature should be unaware that the text he is reading is a translation. He should not be confused by unusual turns of phrase, odd meanings, unfamiliar metaphors, or unknown background material. He should be made to feel that the copy was written originally in his own language. In other words, the translation should be "invisible."

When the medical communication being translated is intended for the private information of only a few individuals the translator requires no

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† Mr. Fischbach is a charter member of the American Translators Association and serves on its Board of Directors.

specialized knowledge other than the scientific subject matter of the translation, except in the case of patents where experience with some legal terminology is desirable. It is assumed that he is thoroughly familiar with the source language and has an active command of the target language, to which he should preferably be native. Although material intended for personal information is generally derived from foreign-language sources, the converse is by no means unusual, as, for example, in the case of English intercompany memoranda addressed to overseas managers and distributors or individual communications to foreign scientists and research institutes.

However, when the medical communication being translated is intended for the promotion of a pharmaceutical product to a large audience of potential users, chiefly physicians, the demands placed on the translator frequently become too complex to be met by one individual alone. Each of the various media mentioned earlier requires some sort of specialized experience. Moreover, every translation should be edited, since no translator, however gifted, can help being influenced—some would say mesmerized—by the construction of the original copy. Even if we were to concede that most physicians can and do write well, how many, in addition to the necessary linguistic knowledge, also have special advertising skills or know the distinct technique of writing for the screen or the ritualistic phrases of the patent world? Medical material comes in such a variety of forms that a specialized approach to its translation is almost mandatory. This approach is embodied in what we might call the translation team.

The translation team, as distinct from the individual translator, is precisely the contribution a client comes to expect from a competent medical translation service. The backbone of such a team is, of course, the physician, but if the final product is to be accurate and effective, yet morphologically tailored to the particular medium for which it is intended, its preparation must draw on the talents of other individuals as well: individuals specifically skilled in the art of copywriting, whether for the eye or the ear; individuals keenly conscious of consistency of both layout and terminology; and, finally, individuals instructed in the peculiarities of foreign typographical practices. This means—in addition to medical men—stylists, editors, typists, and proofreaders.

You might wonder: "What's so unusual or difficult about this approach?" Bear in mind that most of these individuals on such a translation team, in addition to being thoroughly bilingual, must also be familiar with current medical style and terminology in the target area. A foreign-trained physician with upwards of 15 years residence in this country can hardly be expected to have such knowledge, nor can a foreign-born medical writer wholly educated here.

Before we take up the specific problems inherent in translating medical copy, permit me to outline briefly the primary principle of good technical translating in general. In translating scientific as distinct from literary material, forms of words are not an end but a means—admittedly an imperfect means—of transmitting the ideas of the English or foreign author to the foreign or English-speaking reader. If the author's expression of these ideas is deficient or unclear, I, for one, believe it is the duty of the translator to disentangle the author's possible intended meaning and subsume it within an acceptable rendition in the reader's language.

A technical translator must combine three faculties:

1. He must have a fairly extensive knowledge of, and be able to reason in, the subject matter of the translation.
2. He must be able to read the language he is translating well enough so that he can grasp the author's intended meaning.
3. He must himself be able to embody that meaning in lucid and straightforward English, French, Spanish, etc.

Individual words, like individual cells, cover a certain functional area. First, there is the nucleus or core, which carries the general meaning of the word; and then there is a circumscribed mass of protoplasm or fringe area, more or less broad, which imparts a certain color to the word. Seldom will the corresponding words in two different languages cover precisely the same area, both core and fringe.

There is quite a difference between the *denotation* of a word, i.e., its core or actual meaning, and its *connotation* or fringe area, which suggests or implies overtones in addition to its actual meaning. We must not lose sight of the fact that copy which *denotes* one thing in English can easily *connote* something else in the foreign language, particularly if translated literally. This unintentional connotation may prove to be ludicrous, offensive, or even obscene. Another difficulty is that even certain scientific words may look like perfectly safe cognates, yet result in a mistranslation if used as such.

For example, *peptic ulcer* is not *ulcère peptique* but *ulcère gastro-duodénal* in French and conversely *anthrax* in French is not *anthrax* in English, but *carbuncle*. In German, the word *Halsweh* is another such false friend that can be—shall we say—a *pain in the neck*; yet to the German physician it connotes *sore throat*.

Now that these generalities are out of the way, let me turn to some of the specific aspects of medical translating. I should have liked to take up some of the problems that confront the medical translator of foreign texts, but a review of this phase of medical translating would be far too space-consuming and somewhat beyond the scope of this paper. Basically,

the duties of the translator whose copy is intended for foreign publication are fourfold:

1. He must understand the English thoroughly and request clarification from the client when he does not.
2. He must word his translation so as to trigger intrinsic, you might say isotonic, thought processes in the foreign reader and not be afraid to deviate from the original to achieve this end. For this, he needs the understanding and counsel of the client.
3. If necessary, he must *change* the original by selecting an entirely different imagery, coining different slogans, devising a different layout, adopting a different tone, making minor deletions or adding explanatory words—all of this and more, so that his copy will fit the different linguistic genius of the foreign language and the different cultural patterns of the foreign reader. This, however, should only be done with the client's full knowledge.
4. He must exercise editorial judgment and *refrain* from translating anything that would be inappropriate, ludicrous, or accidentally obscene, and he must explain to the client why.

Let me illustrate:

Since different languages have usually adopted different imagery to convey the same metaphoric thought, it might be well before ordering the art work for a specific metaphor to check with the translator whether the same imagery can be used in the foreign version.

Thus, the phrase "to carry coals to Newcastle" comes out in French "to carry water to the ocean"; in Spanish, "to carry wood to the forest"; in German, "to carry owls to Athens" and, in Russian, "to carry samovars to Tula", since that city was a center of samovar manufacture.

"The pot calls the kettle black" is expressed in Spanish by the "donkey calls the mule long-eared."

You can therefore see how important it is for the translator to have all the elements needed for a proper translation—and one very essential element is the artwork.

Sometimes the English copy is really not applicable in certain foreign areas and clients should encourage translators to bring such instances to their attention. In the following examples, it was the translators who saved corporate faces from turning red.

A text submitted for translation into German contained this sentence: "X is highly effective against poison ivy, one of the most common forms of dermatitis." Not so, however, in the German-speaking areas for which the translation was intended.

Or this one, in a text submitted for translation into Brazilian Portuguese: "The solution is stable and can withstand temperatures as low as 10° F. without freez-

ing.” That may be quite a selling point in North Dakota, but not in Brazil where the lowest recorded temperature is 33° F.

The translator has to take liberties with the English text, for customs and everyday living are different in other countries than they are in the U.S. Here is another example:

A radio commercial for a perfumed medicated skin cream, translated into Spanish after a successful run over American radio, flowed out of loudspeakers in Latin America thus: “...attract him...entice him...make him surrender in your arms...use X cream...” This is fine for American ears. But it so happens that a boy does not get close to a girl in Latin America. He does not have a chance to “surrender in her arms.” He is down on the sidewalk, while she is up on the balcony.

You must take foreign customs and habits into account. The translator of advertising copy must know his audience. Professor Hotchkiss of New York University is reported to have told his advertising copy classes to remember that “gents wear pants but gentlemen wear trousers.”

These incongruities can be avoided by advertisers if they keep in mind that what is good for the U.S. market may not be good for their overseas markets. The foreign reader projects what he reads against a background of lore which is his by reason of the group or society from which he springs or in which he lives. To paraphrase a quotation I recently read, medical advertisers should prefer the certainties of knowledge to the certitudes of enthusiasm.

Sometimes it is even very difficult to translate what appear to be the most simple English sentences:

Before translating a phrase such as: “The drug has been found to be effective against *acute otitis and hepatitis*,” it is necessary to determine whether both otitis and hepatitis are acute, or whether only otitis is acute. If only otitis is acute, then the adjective in the foreign must be in the singular; if both are acute, then the adjective must be in the plural.

If the context does not permit him to determine which is meant, the translator must query the client for clarification. It would have been better if the copy had been especially edited for translation and the sentence had read: “Acute otitis and acute hepatitis” or “otitis and acute hepatitis” (if only the hepatitis was acute).

Copy prepared for translation contains many such traps; this is due primarily to the fact that the client is unaware of the requirements of foreign languages. Since it will not be possible for him to anticipate all these difficulties, he should indicate to the translator that he is aware of their possible existence and that he expects him to consult when he is in doubt. Many translators are reluctant to approach the client with ques-

tions of this nature because they fear that he may interpret such queries as a reflection on his copy.

In English, difficulties also arise when modifiers are a combination of adjectives and nouns used as adjectives.

Take the phrase: *thick plaster bandage*. Does it mean a bandage stiffened with a thick paste of plaster of Paris, or a thick bandage stiffened with some plaster of Paris? Does *steam generator* mean a device that generates steam or a generator of something else, say electricity, that is run by steam? How is the translator to know?

The piling up of modifiers in front of nouns, which is so common in English, is a difficult hurdle for the translator to overcome.

Here is a recent example, in which at least one of the five adjectives could have been dropped without loss of meaning: "Eight patients were in the third group, chosen because of *pre-existing chronic underlying structural bronchopulmonary disease* complicating the pneumonia." If the condition is an underlying one, it must have been pre-existent.

Injudicious placement of adverbs such as *only* and *also* will tend to obscure a phrase. For instance, take the sentence: *The first patient took this medication the next day*, and place the adverb *only* in several places and see what happens to the meaning. *ONLY the first patient took this medication the next day* means that none of the other patients took this medication the next day. *The first patient ONLY took this medication the next day* means that the first patient did not gargle, swab his throat, fast, take liquids, nor do anything else but take this medication. *The first patient took ONLY this medication the next day* obviously indicates that he took this and no other medication. *The first patient took this medication ONLY the next day* means that he took the medication as late as the next day. *The first patient took this medication the next day ONLY* indicates that he did not take the medication yesterday, last week, the same day, a week later, or at any other time except the next day. Such key adverbs should not be allowed to "float" around in sentences, since the result is a lack of preciseness of meaning.

It is by no means rare for the translator to receive a text containing obvious inaccuracies, which he is unable to check because he does not have access to the source material.

Here is an actual example from our private practice: "Twenty-one children . . . were treated with X for second- and third-degree burns. . . . Results were excellent in 11, good in 5, fair in 3 and poor in 3." This adds up to 22, not 21.

Length of copy is a serious problem, particularly in journal advertisements. Spanish, French, and other Romance languages require many

more words to convey the same meaning and thought. When translated, the Spanish or French copy will expand approximately 15 to 20 per cent, often as much as 25 per cent. Consequently, long English copy which utilizes all the available space will result in overcrowdedness when the ad is translated. Copywriters should allow for this in their layout and artwork. The headline particularly should be flexible in size, so that even a short English phrase that has to be translated into a long French or Spanish one will still fit without destroying the layout. This need to work at times within very close space limits is what makes the job of translating captions so difficult. The translator must know to what extent the space factor has to be taken into consideration in his choice of wording. The best way you can inform him about the space is to furnish him with a dummy or layout.

There are quite a number of English expressions which, although pleonastic, have come to be accepted in everyday writing. These become unacceptably redundant when translated. Here are a few common examples my colleagues and I have encountered:

"Period of time." In most languages a *period* can refer to nothing but time. In a gynecological context, however, the two extra words may serve a useful distinguishing function.

"Hollow cavity," "annular ring," and the quite common "spaced apart." Only recently I saw the phrase: "A high incidence of nosocomial infections in the hospital".

Then there are such expressions as "surface area" and "pressure gauge," which are justified in English but seldom in translation.

Another vexing problem is that of rendering new terms borrowed from other fields for which there may be no known equivalent, or at least not one known to the foreign physician expected to understand the translated communication. There has been increasing evidence of late that more and more medical writers are receiving extensive training in statistics. We are beginning to find such esoteric expressions as "t-distribution," "confidence interval," and "restricted randomization." Can we in all fairness expect the physician-translator to be familiar with all this lend-lease terminology in English, let alone in his native language?

For example: Someone on the translation team turns to the latest reference books and—to take the case of "t-distribution", which recently came up—finds the following:

"T-distribution or Student's distribution is, among other things, that of the ratio of a sample mean (measured from the parent mean) to a sample variance, multiplied by a constant, in samples from a normal population. It is thus independent of the parent scale parameter and can be used to set confidence intervals to the mean independently of the parent variance."

How are these ideas to be conveyed to the foreign physician without losing his interest? The only thing the translator can do, if the language is Spanish for example, is to write: *distribución de la t.*, *intervalo de confianza*, or *aleatorización restringida*, but chances are these expressions will mean nothing to the foreign doctor.

The foregoing examples are taken from actual clinical papers, which raises the question of whether such papers should not be abstracted for the foreign reader, rather than translated in full.

At any rate, translating for publication is essentially an editorial function which differs from the stylistic editing of ordinary texts in that the originals are in a different language. In an age when medical science borrows so heavily from other disciplines, the translator, however cultured or experienced he may be, must have recourse to numerous and varied sources of information, including other specialized translators. In many instances, the bilingual dictionary as we know it has become quite useless.

There are quite a number of expressions used in present-day advertising copy which, although of fairly recent coinage, are widely understood in this country, yet they are frequently the bane of the translator. Witness *moisturize*, *accessorize*, etc. It must be borne in mind that English is a much less rigidly formalized—and, hence, perhaps less *finalized* (there is another one) language than Spanish or French, for example. The latter are much more tradition-bound, which of course complicates the translator's life. Indeed, I was quite surprised to learn that the word *hospitalize* has been current only since the turn of the century.

Professor Thomas Pyles, the author of *Words and Ways of American English*, notes the flourishing use of the word *complex*, which we owe to psychoanalysis. It is not always easy to translate such terms as *sex complex*, *herd complex*, *conditioned complex*, and similar psychiatric expressions that have come into more general use.

Take *reading clinic* (an establishment for the diagnosis and correction of reading difficulties); *retail drug salesmanship clinic* (a conference of drug detailmen); *writing laboratory* (a classroom where students of composition write under supervision); *treatment-conditioned* (a patient who has been mentally prepared to accept therapy); *pinpoint radiation*, *blueprint for therapy*, *recovery target date*, etc.

Such figures of speech will tax even the most gifted of translators. They illustrate why it is imperative that any translation into the foreign be critically reviewed by a bilingual editor native to English, in fact to modern American English.

We have found from experience that foreign physicians in the U.S. whose native tongue is still comparatively uncontaminated by English will not always catch all the overtones of such expressions. Conversely, if

they have lived here long enough to perceive the full flavor of these terms, their native style may no longer be sufficiently unadulterated to satisfy linguistically more puristic fellow-physicians back home, for whom, after all, they are writing. Other peoples are often filled with intense pride in their idiom, for example most Latins, and dislike its imperfect use.

In matters of form where he has a choice, the medical translator must often decide whether to write for acceptance by his client (the American advertiser) or the traditional and perhaps elderly foreign physician whose training may predate his own, or whether to conform to the latest usage.

For example, should chemical formulas be inverted in French and Spanish? In other words should H_2SO_4 become SO_4H_2 ?

Should *Mycobacterium tuberculosis* become *bacille* (or, in Spanish, *bacilo*) *de Koch*? Should blood pressure be expressed in mm. of mercury, or in cm. of mercury, as is apparently common in some foreign countries?

And, for that matter, should *systolic* and *diastolic pressure* readings be expressed as *maximum* and *minimum* pressure, respectively, as is done in Latin America and Europe? Should he use *c.c.*, *cc.* or *cm³*; *meg.* or γ or μg ?

In translations intended for only a few readers it does not matter which correct form is used. For publication, however, nothing but the most widespread usage should dictate the translator's decision.

Another difficulty the conscientious medical translator encounters is how to tone down the claims which are the mainstay of American advertising copy. We must realize that the doctor in Amsterdam or Annam is not necessarily accustomed to the same phraseology or form—and form plays a greater role in many countries overseas than we sometimes realize. Our plain and direct approach is often interpreted as abruptness. To write “following thorough experimentation and after extensive clinical trials, we have come to believe that our antibiotic is highly effective in urinary tract infections and probably second to none,” will sound more convincing in Oslo and Dakar than an assurance to the effect that “for urinary tract infections, more clinicians prescribe our antibiotic than any other” or “our antibiotic is more effective than any other in clinical use today.”

By the same token, a more promising approach may be to emphasize the age and tradition of one's company, the quality of its research, the scope of the clinical investigations it sponsors or encourages, rather than the mere volume of its sales, its physical dimensions in square miles, or wealth in dollars and cents.

Nor should promotional material sent to the foreign physician become didactic to the point of discussing in detail rudimentary concepts in basic anatomy, pathology, or physiology.

A number of years ago, a text on intra-articular injection of hydrocortisone went into lengthy explanations on how to locate the various joints.

More recently, a piece on diuretics contained a long discussion of the basic mechanism of sodium and water retention.

Such background may be necessary to make a point, but it should never sound as if the foreign doctor were being taught something he did not know—or worse, had forgotten.

Abbreviations are another problem. Those not commonly used by the medical profession as a whole should be avoided, however obvious they may be to the specialist. If for reasons of space it is desirable to use abbreviations, these should be fully identified the first time they occur.

Although most would recognize BUN as the abbreviation of *blood urea nitrogen*, how many would know what SGCT is? The field is hematology. It stands for *serum glutamic-oxaloacetic transaminase*.

In a list of hospital equipment items we were recently asked to translate for overseas distribution, the term IPP respirator appeared. None of the hospital administrators we consulted knew the answer, so we called the client and finally found out that the abbreviation stood for *intermittent positive pressure respirator*.

Most translators have a collection of odd and frequently amusing, not to say disastrous, boners they have come across, and I think they might be of interest. Here are a few perpetrated by applicant translators:

A homemade bishop upon closer examination turned out to be a *handmade episcopope*.

In describing a piece of machinery being readied for operation, another aspiring translator wrote that the last thing the machine required was, not *final lubrication*, but *extreme unction*.

When it comes to errors, the translating machine can also be human.

Witness this reported machine translation of *the spirit is willing but the flesh is weak*: "*The whiskey is good but the meat is spoiled*."

One of my favorites concerns a rendition from the Japanese which turned up as *invisible insanity*. Since the Japanese was itself a translation from one of the European languages, the original source was checked and the mystery solved. *Invisible insanity*, you might like to know, is *out of sight, out of mind*.

Translations into the foreign yield the richest crop of boners.

What would a man do if he owned a construction firm in Chile and an American manufacturer offered him a *male water sheep*? He would be advised to buy it if what he needed was a *hydraulic ram*.

One of the most famous boners of all time was made a good number of years ago, when an American toothpaste manufacturer began an intensive campaign in Latin

America to advertise the fact that the company had improved its product, which was now available in ribbon form, thus permitting the paste to stay on the brush. The theme of the campaign was "X toothpaste now comes in ribbon form." This phrase was translated literally to read "*La crema dental X viene ahora encinta.*" Latin-American readers could not stop laughing, for to them this literal translation, when heard over the radio, meant "*X toothpaste now comes pregnant.*"

Finally, I would like to formulate some basic recommendations to those who write medical copy intended for translation and ultimate distribution abroad:

1. Write clear, straightforward, descriptive English, particularly when a product is involved: what is it, what will it do, how will it do it, etc.
2. Refrain from using strictly domestic words or phrases. Too often our problem as translators is having to interpret the English, and sometimes it is not easy to know what the copywriter intended.
3. When new technical terminology has been coined, why not give the translator some guidance, perhaps through a parenthetical explanation.
4. Remember that your English text will expand some 15 to 20 per cent in French, Spanish, and other Romance languages. Allow for this in your layout.
5. Do not expect the translator to divine what you have in mind when you create an inspired caption or subhead without context tie-in or illustration.
6. If your company has already established certain slogans, trademarks, stylistic or layout practices, or new technical expressions in the particular foreign language, give the translator a break and let him in on it, for example by making available to him earlier published translations on the particular product, process, or treatment.
7. Whenever possible, give illustration aid by submitting layout dummies, artwork, or descriptions. This will help the translator visualize and result in a more adept and effective translation.
8. Avoid direct exhortations. The Syrian or Nicaraguan physician may resent it when told: "prescribe drug X for all your patients with infection." He may consider exclamations and imperatives a lack of propriety and due reserve.
9. Do not lecture the foreign doctor on basic medical concepts which he has known since his first year of medical school.
10. If you have thought of an effective gimmick, pun, metaphor, or tie-in between art and headline copy, discuss it first with your translator to see how it can be adapted to the foreign language. Do not expect it to be translatable.